

## REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 29 NOV 1928

Date of writing Report 30<sup>th</sup> October 1928 When handed in at Local Office

19 Port of YOKOHAMA

No. in Survey held at

Yokohama

Date, First Survey 9<sup>th</sup> OctoberLast Survey 24<sup>th</sup> October 1928

Reg. Book.

on the

Steel S.S. "HAGURO MARU"

(Number of Visits.....6.....)

Tons

Gross 3352.63

Net 2047.65

Built at

Yokohama

By whom built

Yokohama Dock Co.

Yard No. 171

When built 1928

Owners

Itaya Shosen Kaisha

Port belonging to

Fuchu

Electric Light Installation fitted by

Yokohama Dock Co.

Contract No.

When fitted 1928

System of Distribution

Two wire.

Pressure of supply for Lighting

100

volts, Heating

volts, Power

volts.

Direct or Alternating Current, Lighting

Direct

Power

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off

Yes.

Generators, do they comply with the requirements regarding overload

Yes.

, are they compound wound

Yes.

are they over compounded 5 per cent.

Yes.

, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel

, is an adjustable regulating resistance fitted in

series with each shunt field

Yes.

Are all terminals accessible and clearly marked

Yes.

, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited

Yes.

Are the lubricating arrangements of the generators as per Rule

Yes.

Position of Generators

Starboard side Main Engine Room on bottom platform.

is the ventilation in way of the generators satisfactory

Yes.

, are they clear of all inflammable material

Yes.

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

and

, are the generators protected from mechanical injury and damage from water, steam or oil

Yes.

are their axis of rotation fore and aft

Yes.

Earthing, are the bedplates and frames of the generating plant efficiently earthed

Yes.

are the prime movers and

their respective generators in metallic contact

Yes.

Main Switch Boards, where placed

After side of Generator.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes

Yes.

are they protected from mechanical injury and damage from water, steam or oil

Yes.

, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

and

are they constructed wholly of durable, incombustible non-absorbent materials

Yes.

, is all insulation of high dielectric strength and of

permanently high insulation resistance

Yes.

, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework

Yes.

, and is the

frame effectively earthed

Yes.

Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

, accessibility of all parts

Yes.

, absence of fuses on back of board

Yes.

, proportion of omnibus

bars

Yes.

, individual fuses to voltmeter, pilot or earth lamp

Yes.

, connections of switches

Yes.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

with two fuses and one circuit breaker 150 amps for the dynamo. Double pole switch Six outgoing circuits

Instruments on main switchboard

one

ammeters

one

voltmeters

synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Earth lamps.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules

Yes.

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule

Yes.



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**Insulation of Cables**, state type of cables, single or twin Single are the cables insulated and protected as per Tables III or IV of the Rules yes

**Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load 0 volts

**Cable Sockets and other connections**, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets yes

**Paper Insulated Cables**. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound yes

**Cable Runs**, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes

**Support and Protection of Cables**, state how the cables are supported and protected By plate & clips. Lead covered, lead covered & armoured

If cables are run in wood casings, are the casings and caps secured by screws yes, are the cap screws of brass yes, are the cables run in separate grooves yes. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI yes

**Refrigerated Chambers**, if lights are fitted, are the cables and fittings in accordance with the special requirements yes

**Joints in Cables**, state if any, and how made, insulated, and protected none

**Watertight Glands and Deck Tubes**, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

**Bushes in Beams and Non-watertight Positions**, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made Lead

**Earthing Connections**, state what earthing connections are fitted and their respective sectional areas yes, are their connections made as per Rule yes

**Alternative Lighting**, are the groups of lights in the propelling machinery space arranged as per Rule yes

**Emergency Supply**, state position and method of control of the emergency supply and how the generator is driven yes

**Navigation Lamps**, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes, are the switches and fuses grouped in a position accessible only to the officers on watch yes, has each navigation lamp an automatic indicator as per Rule yes, are separate screens provided for the use of oil and electric side lights yes, are separate oil lanterns provided for the mast head lights and side lights yes

**Fittings**, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected no, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none, how are the cables led yes, where are the controlling switches situated yes

**Searchlight Lamps**, No. of none, whether fixed or portable yes, are their fittings as per Rule yes

**Arc Lamps**, other than searchlight lamps, No. of yes, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes

**Motors**, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes, are their axis of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

**Control Gear and Resistances**, are the generator field and motor speed regulators, starters and controllers constructed as per Rule yes

**Lightning Conductors**, where lightning conductors are required, are these fitted as per Rule yes

**Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office yes

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.	
MAIN	1	10	100	100	650	Vertical steam engine			
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									
LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	0.1168	3/16	0.448	130	30	Rubber	Lead covered, armoured.
	AUXILIARY GENERATOR	✓							
	EMERGENCY GENERATOR	✓							
	ROTARY TRANSFORMER...	✓							
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM and BOILER ROOM lights	2	0.01046	7/16	0.132	31	20'	do.	do.
	Bridge deck Lights	2	0.02214	7/16	0.132	31	250'	do.	do.
	Upper deck Lights	2	0.02214	7/16	0.132	46	60'	do.	do.
	WIRELESS	2	0.02214	7/16	0.132	46	260'	do.	do.
	SEARCHLIGHT	✓							
	MASTHEAD LIGHT...	3	0.00152	18	0.044	6	300'	do.	do.
	SIDE LIGHTS...	6	0.00152	18	0.044	6	280'	do.	do.
	COMPASS LIGHTS...	2	0.00152	18	0.044	6	250'	do.	do.
	POOP LIGHTS...	3	0.00152	18	0.044	6	750'	do.	do.
	CARGO LIGHTS...	2	0.02214	7/16	0.132	46	250'	do.	do.
	ARC LAMPS...								
	HEATERS								
MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR								
	VENTILATING FANS								



All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

R. Miyake

Electrical Engineers.

Date 6<sup>th</sup> Nov. 1928

#### COMPASSES.

Distance between electric generators or motors and standard compass

90 ft.

Distance between electric generators or motors and steering compass

120 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 3 Ampères 15 feet from standard compass 12 feet from steering compass.

A cable carrying ✓ Ampères ✓ feet from standard compass ✓ feet from steering compass.

A cable carrying ✓ Ampères ✓ feet from standard compass ✓ feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *Yes.*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be — degrees on — course in the case of the standard compass, and — degrees on — course in the case of the steering compass.

X *G. Abey.*

Builder's Signature.

Date 6<sup>th</sup> Nov. 1928

Is this installation a duplicate of a previous case — If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c.) *The electric light installation of this vessel has been fitted in accordance with the Society's Rules. It has been examined and tested under service conditions and found satisfactory.*

It is submitted that  
this vessel is eligible for  
THE RECORD

*Elec. light*

*4/12/28.*

Total Capacity of Generators 10 Kilowatts

The amount of Fee ... *¥105.00* : { When applied for, 27-10-28  
When received, 12-11-28  
Travelling Expenses (if any) £ : :

*J. Brooke Smith*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*Elec Light*



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1m. 9.22.—Transfer.  
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